



AA RESEARCH

2022 South African
Sixth Annual 'Entry-Level'
Vehicle Safety Report



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1. Introduction

1.1 Background to the study

The Automobile Association of South African (AASA) conceptualised the Entry-Level Vehicle Safety (ELVS) report in 2016. In its sixth iteration in 2022, the ELVS report continues to shine the spotlight on the potentially life-saving safety features of locally available 'entry-level' vehicles.

The current socio-economic outlook remains negative reflecting a heavier burden on South African consumers in 2022 than in previous years. Compounding the situation is the current electricity and fuel crises. For this reason, the 'entry-level vehicle' market remains one of the most competitive as motorists seek more affordable driving options with lower prices. However, this is sometimes attained by excluding certain life-saving safety features.

Being cognisant of inflation rates and the weakening Rand, as well as its direct impact on import costs, the sixth instalment of this report increased the entry-level vehicle cost threshold to R270 000. A disconnect between price and safety was highlighted in the 2022 ELVS report.

The AASA notes that a desktop research methodology was utilised in this report and that the definitive measure of a vehicle's safety can only be acquired through crash testing. The data presented here should be used as an indication of a vehicle's safety equipment, and not as the sole indicator of the vehicle's overall safety rating. Vehicle safety data was acquired from the latest brochures available online, and telephonically confirmed with manufacturer/importer product managers and/or dealer sales staff.

A point-based system is utilised in this report by awarding 'safety points' to vehicles for the existence of an Anti-lock Braking System (ABS), Electronic Stability Control (ESC), and airbags. Additional points are awarded to vehicles crash tested under the NCAP system, in this case Global NCAP's #SaferCarsForAfrica programme. Results of the programme so far are available at <https://aa.co.za/crash-test/>

The AASA acknowledges that some vehicles which achieved low crash test ratings are, nonetheless, 'credited' with points as these vehicles have been crash tested. It remains a part of the methodology to encourage manufacturers who believe this skews the results, to make their vehicles available for crash testing, and thereby secure additional points for doing so. As mentioned above, the ELVS report is intended to provide an indication of the safety technologies available on vehicles. The only reliable and trusted measure of a vehicle's safety can be determined through crash testing the vehicle.

The resultant safety scores do not in any way consider the structural engineering safety aspect of the sample of vehicles. True and accurate safety ratings can only be concluded through a scientifically managed crash test, such as those conducted by Global NCAP for the #SaferCarsforAfrica campaign.

Global NCAP's #SaferCarsforAfrica initiative released results from 2017 to 2022. In the 2018 test, one of the vehicles tested, the Nissan NP300 Hardbody, scored zero points and zero stars for adult occupant safety, despite having two airbags, and an Anti-lock Braking System¹. Without crash testing, this vehicle, with its standard safety features, would likely have scored fairly well in this report.

In 2019, for the first time in Africa, the #StopTheCrash Partnership hosted live demonstrations of crash avoidance technologies in support of the United Nations Global Goals and the Decade of Action for Road Safety². Launched at the Kyalami Grand Prix Circuit in Johannesburg with the support of the AASA, the #StopTheCrash Partnership event had a special focus on the life-saving benefits of Electronic Stability Control (ESC), Autonomous Emergency Braking (AEB), and Anti-lock Braking Systems (ABS).

The technologies promoted by #StopTheCrash have the potential to save thousands of lives every year and the UN has developed international standards to help encourage countries around the world to mandate these life-saving technologies. Many countries have taken a lead in adopting such legislation to protect drivers, riders, and other vulnerable road users. Global NCAP and the #StopTheCrash Partnership encourages the South African government to take a leadership role for the African continent in the fitment of vehicle safety technology.

Led by Global NCAP, the #StopTheCrash Partnership includes the ADAC, Bosch, Consumers International, Continental, Denso, Thatcham Research, Veoneer, ZF, and the Towards Zero Foundation. All are united in their shared commitment to promote advanced vehicle safety technologies in support of the UN's Global Goals and the Decade of Action for Road Safety.

¹ SaferCarsforAfrica Press Pack (2019). Available: <https://www.dropbox.com/sh/rt3wkq1d36uwizs/AACKcBjCg7nr1ldd24TAn4oja?dl=0>

² StopTheCrash. (2019). Available: https://www.dropbox.com/sh/8zwzpykx7wy32e/AAAmnxf6_ndY-4xPlmq7NFI9a?dl=0

1.2 Purpose of the Study

Motor vehicle crashes resulted in 12 541 deaths on South African roads in 2021³, and have an annual financial impact on the South African economy of approximately R198 billion⁴, which equates to 4% of South Africa's Gross Domestic Product (figure extrapolated from 2015 data by the Road Traffic Management Corporation, RTMC). The AASA supports the safe systems approach to road safety as the most effective means to reducing these fatalities. A key component of the safe systems approach is to ensure safer vehicles on roads.

Motor vehicles available in South Africa are not equal when viewed in terms of the quality and features on offer, especially when considering the number of basic safety features available in 'affordable' motor vehicles. How then does a buyer maximise their budget in terms of safety, or rather get the most safety for the money spent? This report seeks to identify and compare the standards of safety equipment present in motor vehicles on the South African market for under R270 000 (entry-level).

1.3 Scope of Research

Objectives of this report:

- Identify the basic safety features available in motor vehicles retailing under R270 000 in South Africa;
- Identify prominent safety features in these motor vehicles;
- Provide readers with a method that allows for the comparison of safety features found in these vehicles;
- Highlight the vehicles with the most, and least, safety features in relation to their retail pricing.

1.4 Overview of Report

The report addresses the fundamentals of a vehicle's safety features. These are divided into 'Active' and 'Passive' safety features. The importance of each of these safety features is explained, followed by the methodology used in addressing their significance. In turn, this allows for the allocation of notional 'safety' points for the motor vehicles under investigation. Once this is achieved, the reader can gain a clearer understanding of how entry-level vehicles on the South African market rate in terms of both safety and affordability.

It is hoped, and anticipated, that with the adoption of scientific vehicle testing through a localised New Car Assessment Programme (NCAP) this report will, in time, become redundant.

³ Road Traffic Management Corporation. 2021. *State of Road Safety Report, January – December 2021*. Available: https://www.rtmc.co.za/images/rtmc/docs/traffic_reports/calendar/Calendar-Report-2021.pdf

⁴ Road Traffic Management Corporation. 2015. *Estimated Cost of Crashes in South Africa 2015*. Available: <http://www.rtmc.co.za/index.php/publications/reports/cost-of-crashes>. Note the cost of R198 billion is calculated by adding five percent per annum to the figure of R142 billion to account for annual inflation increases. The RTMC has not published an update to this figure since 2015.

2. Equipment review

2.1 Introduction

For the purpose of this report, the AASA examined each of the vehicles in the selected price bracket for what may be regarded as the minimum safety features which promote increased safety, in preventing crashes, or moderating their effects. The combination of Anti-lock Braking Systems (ABS) and Electronic Stability Control (ESC) in the European Union – where ESC became mandatory in all new cars from November 2014 – is estimated to have prevented at least 188 500 crashes and saved more than 6 100 lives since 1995⁵. These minimum safety features, as well as the motor vehicles under investigation, are:

2.2 Active and Passive safety features

2.2.1 **Active safety features** refer to devices and systems that assist in keeping a motor vehicle under control and possibly prevent a crash from occurring. According to the RTMC's State of Road Safety Report for January to December 2021, 85% of fatal crashes were caused by human error⁶. This figure represents a 1% decrease from 86% in 2020.

The Safe-Systems approach recognises that humans will always make mistakes and may get involved in road crashes, and therefore requires all elements of the system to be forgiving of this and not result in death or serious injury.⁷ It is therefore more necessary than ever for vehicles to be equipped with safety features that prevent accidents. Active safety features, therefore, are automated systems which aid in compensating for human error⁸. Active safety features investigated within the range of motor vehicles are:

- *Anti-lock Braking System (ABS)*: ABS prevents wheel lock-up and ensures vehicle stability as well as optimal deceleration while braking. ABS therefore significantly reduces stopping distance. ABS also assists drivers to steer in emergencies by restoring traction to the tyres. If

⁵ International Transport Forum. (2016, October 3). *Zero Road Deaths and Serious Injuries: Leading a Paradigm Shift to a Safe System*. Paris: OECD. Available: <https://www.itf-oecd.org/sites/default/files/docs/zero-road-deaths-media-release.pdf>

⁶ Road Traffic Management Corporation. (2021). *State of Road Safety Report, January – December 2021*. Available: https://www.rtmco.co.za/images/rtmc/docs/traffic_reports/calendar/Calendar-Report-2021.pdf

⁷ Road Traffic Management Corporation. (2018). *Revised Strategic Plan 2015-2020 & Annual Performance Plan 2018-2019*. Available: http://pmg-assets.s3-website-eu-west-1.amazonaws.com/Road_Traffic_Management_Corporation_APP_201819.pdf

⁸ Global NCAP. (2015, October 19) *#STOPTHECRASH: A New Partnership Promoting Life Saving Crash Avoidance Technologies*. Available: <http://www.globalncap.org/stopthecrash-a-new-partnership-promoting-life-saving-crash-avoidance-technologies/>

a wheel threatens to lock during hard braking or on slippery roads, the anti-lock braking system regulates the braking pressure in a targeted manner, thereby ensuring optimum braking. In this way, the driving stability and manoeuvrability of the vehicle is maintained, even where there are adverse driving conditions such as sand, gravel or water.

- *Electronic Stability Control (ESC)*: ESC is the most significant advancement in vehicle safety since the introduction of the seat belt and one of the most important crash avoidance systems currently available. This anti-skid technology has already helped prevent hundreds of thousands of loss-of-control crashes and saved tens of thousands of lives. On dry, wet, or slippery roads if the vehicle starts to skid, ESC corrects the slide by reducing engine torque and braking individual wheels to bring the vehicle back on course. The system uses sensors to continuously monitor the stability of the vehicle. When an unstable state is detected, for instance as the result of a sudden direction change, ESC responds in milliseconds and stabilises the vehicle. If the system senses oversteer (i.e., that the rear of the car is starting to drift sideways out of the turn), ESC applies the brakes to the front wheel on the outside of the turn to create a counteracting torque about the vertical axis of the vehicle. This stabilises the vehicle and turns it back onto the path intended by the driver.

2.2.2 **Passive safety features** refer to systems within the motor vehicle that protect occupants from injury in the case of a motor vehicle crash. Seatbelts will serve as a passive safety feature but are not included here as they are mandatory (and included) in all vehicles. The passive safety features under consideration for this report are the secondary/supplementary restraint system (SRS), more commonly known as airbags, which provide a cushion upon impact to protect the driver and passengers during a crash. Each vehicle's specification was examined for the presence of:

- Driver side airbags
- Passenger side airbags
- Curtain airbags (airbags located above the head along the roof-lining)
- Side airbags

The location of the various airbags is illustrated in Figure 1

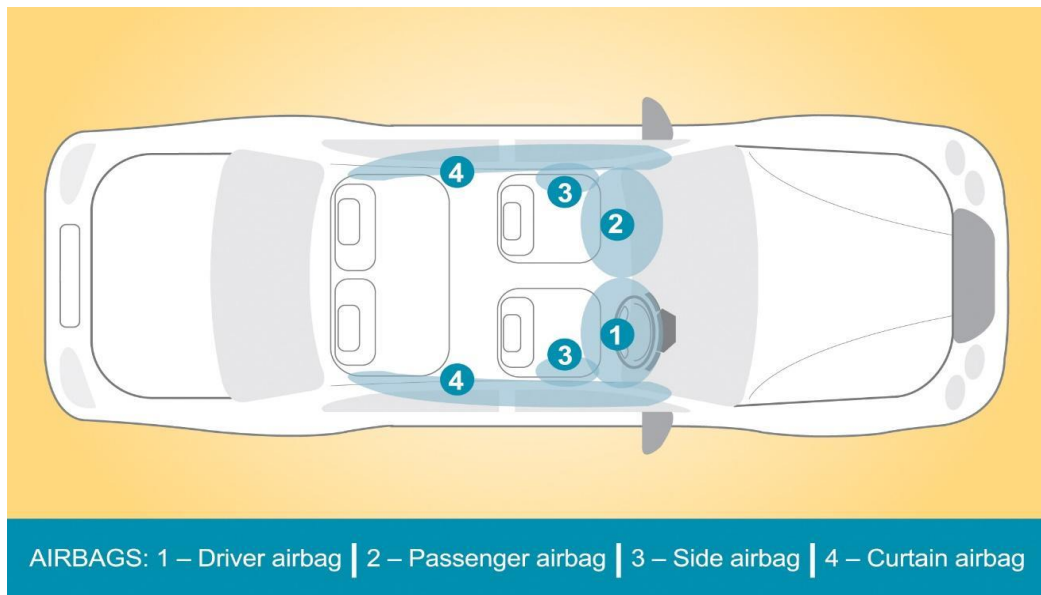


Figure 1. Location of airbags

2.2.3 **Global (#SaferCarsForAfrica) NCAP testing** – Global NCAP has created the five-star safety rating system to help consumers and businesses compare vehicles more easily, and to help them identify the safest choice for their needs. The safety rating is derived from a series of vehicle tests, designed and carried out by NCAP at its laboratory in Germany. These tests represent, in a simplified way, important real-life crash scenarios that could result in injury, or death, of occupants or other road users. The number of stars reflects how well the vehicle performs in NCAP tests but is also influenced by what safety features the vehicle manufacturer is offering in each market. A high star rating shows not only that the test result was good, but also that safety equipment on the tested model is readily available to all consumers.⁹ For this report, only ratings from crash tests conducted for the African market through Global NCAP's #SaferCarsForAfrica initiative, were considered.

⁹ EuroNcap. (2016, September 20). *How To Read The Stars*. Available: <http://www.euroncap.com/en/about-euro-ncap/how-to-read-the-stars/>.

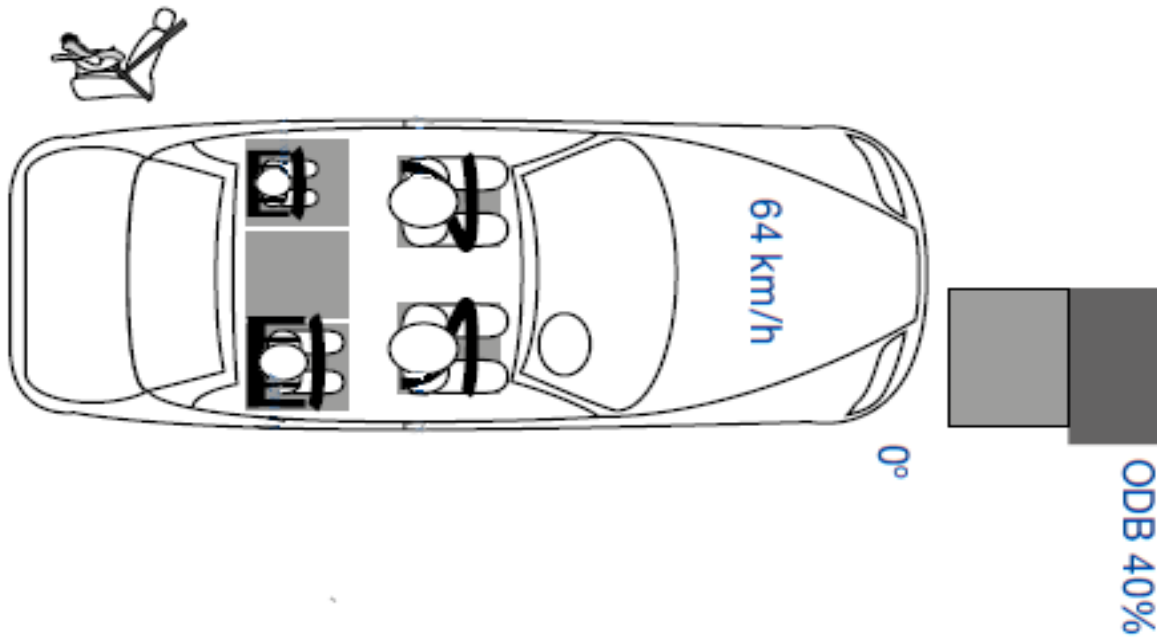


Figure 2. Crash test protocol for #SaferCarsForAfrica

The Global NCAP's #SaferCarsForAfrica was launched in South Africa in November 2017 and included five cars for crash testing. Cars are crashed at 64km/h in a straight line at 40% offset.¹⁰ From 2018 to 2022 an additional fourteen cars have been crash tested for The Global NCAP's #SaferCarsForAfrica.

NOTE: There are several NCAP testing standards throughout the world (EuroNCAP, ANCAP, ASEAN NCAP, IIHI, etc.) and while these tests are critical in terms of a high quality third party independent testing standard, buyers would be encouraged to look at the testing requirements for their region. It cannot be assumed that two similarly named vehicles will have the same rating in different markets. A three (3) star rating on one may not be the equivalent to a three (3) star rating on another. Further, any change in manufacturing process, materials or specifications can have a direct impact on the safety rating of a vehicle. For this reason, the only vehicles awarded additional points for being crash tested were those tested as part of the #SaferCarsForAfrica campaign.

The presence of the features highlighted will serve as the standard to determine the level of safety of motor vehicles under R270 000 in South Africa. A point-based system is used to award motor vehicles 'safety points' in relation to the existence of fitted safety equipment. Furthermore, motor vehicles crash tested under the NCAP system (in this case Global NCAP's #SaferCarsForAfrica) will be given

¹⁰ Global NCAP. (2022), #SaferCarsforAfrica. Available: <https://www.globalncap.org/safercarsforafrica>

additional points as this indicates that these cars' safety ratings have been tested for the South African market. This scoring procedure is explained in further detail in the methodology section. The AASA recognises that various safety features contribute differently in terms of fatality/injury prevention, but for the purpose of this report, scores are awarded merely on the face value of their existence.

2.3 Sample of motor vehicles

Table 1 indicates the motor vehicles that, at initiation of the 2022 study, had a retail price of less than R270 000. Thirty-eight (38) models make up the sample of vehicles from fourteen (14) different manufacturers. In the 2022 ELVS report, entry-level bakkies are included, as they are used by many individuals as passenger vehicles. They are also used in fleets, which directly impacts occupational health and safety of drivers and labourers. All vehicle pricing and safety features have been collected from dealership brochures, confirmed with manufacturer product managers telephonically, and are correct as of 04 April 2022.

Note: Not all levels of the same vehicle models were selected, only vehicles with variances in safety equipment were included.

Table 1. Make, model, and retail value (highest to lowest) of sample motor vehicles

Make and Model	2022 Price
Toyota Rumion 1.5 S MT	R250 500.00
Suzuki Vitara Brezza 1.5 Manual	R248 900.00
Suzuki Ciaz 1.5 Manual	R245 900.00
JMC Landwind 5 2.0T Lux	R241 990.00
Suzuki Ertiga 1.4 Manual	R241 900.00
GWM Steed 5 Double Cab 2.2 Mpi 4x2 Base F/L	R235 900.00
Mahindra XUV 300 W4	R234 999.00
Kia Pegas 1.4 MT LX	R234 995.00
JMC Carrying S/C SWB 1.6 Ton Dropside STD	R233 880.00
Volkswagen Polo Vivo 55kW Trendline	R232 500.00
Toyota Starlet 1.4 Xi MT	R225 200.00
Fiat 500 0.9L FWD SMT	R223 900.00
Mahindra PIK UP Single Cab S4 4x2	R222 999.00
Suzuki Baleno 1.4 Manual	R221 900.00
BAIC X25 SUV 1.5 + MT	R219 990.00
JMC Carrying S/C SWB Chassis Cab	R219 880.00
GWM Steed 5 Single Cab 2.2 Mpi 4x2 Workhorse F/L	R215 900.00
Honda Amaze 1.2 Trend Manual	R209 100.00
Hyundai Grand i10 1.0 Motion Manual	R204 900.00
Renault Kiger 1.0I Energy Life	R204 900.00
Nissan NP200 1.6 8V Base	R203 900.00
Suzuki Ignis 1.2 Manual	R199 900.00
Kia Picanto 1.0 MT Smart	R195 995.00
Datsun Go+ A (O) Mid	R194 700.00
Mahindra KUV 100 #XPRESZ Panel Van	R193 999.00
Renault Triber 1.0I Expression 5-dr	R193 400.00
Toyota Agya 1.0 MT	R192 300.00

Suzuki Dzire 1.2 Manual	R185 900.00
Suzuki Swift 1.2 Manual	R184 900.00
Datsun Go A (O) Mid	R184 600.00
Hyundai Atos 1.1 Motion MT	R183 500.00
Mahindra Bolero BMT	R176 999.00
Suzuki Celerio 1.0 GA MT	R174 900.00
Renault Kwid 1.0l Expression 5-dr ABS	R170 400.00
Mahindra KUV 100 NXT	R162 999.00
Suzuki Super Carry 1.2 Pick-Up	R159 900.00
Suzuki S-Presso 1.0 Manual	R152 900.00
BAIC D20 Hatchback 1.3+5MT Comfort	R149 990.00

Pricing source: (Manufacturer websites and brochures)

3. Research methodology

3.1 Identification of vehicle sample

For the 2022 report, the R270 000 designation was set as the benchmark in identifying the vehicles for investigation.

Scoring increments are considered at values of R10 000. The purpose of this is to allow a prospective buyer to consider how much more safety they can “buy” for an additional R10 000. By way of example, a vehicle costing R270 000, with a 10% deposit, financed over 72 months, and with an interest rate of 12%, produces an estimated monthly instalment of R4 750.70. A variance of R10 000 on the vehicle’s purchase price will add or remove roughly R175.95 from the monthly instalment costs.

Note: These figures are indicative. They are provided to indicate an approximation of the difference in monthly instalment that a buyer may expect based on this financing model – *real world numbers will vary.*

3.2 Safety scoring

A safety point-based system was developed with weights allocated to the existence of certain safety features. Active safety features such as ABS and ESC were given the most significant weights (30 points each), in recognition of their core function of **avoiding collisions**.

In relation to passive safety features, each available airbag scored 10 points. The only exception is the curtain airbag, which scores 20 points (an additional 10 points), as studies show curtain airbags can reduce life threatening head injuries by up to 50%.¹¹

Safety points are also allocated to motor vehicles that are confirmed to have undergone the Global NCAP #SaferCarsForAfrica crash test. As NCAP testing is not mandatory for vehicles to be approved for market release, the vehicles which have undergone the process represent a particular, repeatable safety benchmark which allows the public to evaluate their crash performance. As such, an additional five safety points is allocated for each star achieved on the NCAP safety rating scale (maximum of five stars, 5 x 5 = 25 maximum achievable points).

A **maximum of 135 points** is achievable if a motor vehicle has all the safety features installed. Safety feature weighting can be seen in the Table 2:

¹¹ Insurance Institute for Highway Safety. (2006, October 7). *Status Report* Vol. 41, No.8.

Table 2. Safety feature weighting

Active safety (crash prevention)	Maximum Score	Comments
Anti-lock Braking System (ABS)	30	Present – full score. Absent – no score
Electronic Stability Control	30	Present – full score. Absent – no score
Passive safety (crash protection)	Maximum Score	Comments
Driver's airbag	10	Present – full score. Absent – no score
Front passenger airbag	10	Present – full score. Absent – no score
Side airbags	10	Present – full score. Absent – no score
Head / curtain airbags	20	Present – full score. Absent – no score
Crash test rating (frontal impact)	25	Pro-rata – five points per star. Must be for equivalent spec vehicle rated under current Global NCAP
Total points achievable	135	Perfect score

In addition to the weights/points allocated, the following 'Safety/Affordability' index is provided:

$$\frac{\text{Overall Safety Score}}{(\text{Price of Vehicle} \div R10000)} = \text{Safety/Affordability Score}$$

Example:

$$= \frac{135}{(R270000 \div R10000)}$$

$$= \frac{135}{(27.0)}$$

$$\underline{= 5} \quad (\text{Safety/Affordability score})$$

The example above is calculated with the maximum scores of 135 safety points and the R270 000 vehicle price in mind. This index allows us to compare the safety features (associated with this report) one can buy in terms of every R10 000 spent.

4. Overall results

Table 3. Overall safety scores for all 39 vehicle models (from highest to lowest total safety score)

Make & Model	Price	Total	Anti-lock brakes (ABS)	Electronic Stability Control (ESC)	Driver's airbag	Front passenger airbag	Side airbags	Curtain airbags	Crash test rating (Ncap)	Safety per 10k
Maximum Score	R270 000	135	30	30	10	10	10	20	25	5.00
Fiat 500 0.9L FWD SMT	R 223 900.00	90	30	30	10	10	10	0	0	4.02
Suzuki Celerio 1.0 GA MT	R 174 900.00	80	30	30	10	10	0	0	0	4.57
Suzuki Swift 1.2 Manual	R 184 900.00	80	30	30	10	10	0	0	0	4.33
Suzuki Dzire 1.2 Manual	R 185 900.00	80	30	30	10	10	0	0	0	4.30
Suzuki Baleno 1.4 Manual	R 221 900.00	80	30	30	10	10	0	0	0	3.61
Toyota Starlet 1.4 Xi MT	R 225 200.00	80	30	30	10	10	0	0	0	3.55
Mahindra XUV 300 W4	R 234 999.00	75	30	0	10	10	0	0	25	3.19
Honda Amaze 1.2 Trend Manual	R 209 900.00	70	30	0	10	10	0	0	20	3.33
Suzuki Ignis 1.2 Manual	R 199 900.00	65	30	0	10	10	0	0	15	3.25
Suzuki S-Presso 1.0 Manual	R 152 900.00	65	30	0	10	10	0	0	15	4.25
Renault Kwid 1.0l Expression 5-dr ABS	R 170 400.00	60	30	0	10	10	0	0	10	3.52
BAIC D20 Hatchback 1.3+5MT Comfort	R 149 990.00	50	30	0	10	10	0	0	0	3.33
Mahindra KUV 100 NXT	R 162 999.00	50	30	0	10	10	0	0	0	3.07
Hyundai Atos 1.1 Motion MT	R 183 500.00	50	30	0	10	10	0	0	0	2.72
Datsun Go A (O) Mid	R 184 600.00	50	30	0	10	10	0	0	0	2.71
Toyota Agya 1.0 MT	R 192 300.00	50	30	0	10	10	0	0	0	2.60
Renault Triber 1.0l Expression 5-dr	R 193 400.00	50	30	0	10	10	0	0	0	2.59
Mahindra KUV 100 #XPRESZ Panel Van	R 193 999.00	50	30	0	10	10	0	0	0	2.58
Datsun Go+ A (O) Mid	R 194 700.00	50	30	0	10	10	0	0	0	2.57
Kia Picanto 1.0 MT Smart	R 195 995.00	50	30	0	10	10	0	0	0	2.55
Nissan NP200 1.6 8V Base	R 203 900.00	50	30	0	10	10	0	0	0	2.45

Hyundai Grand i10 1.0 Motion Manual	R 204 900.00	50	30	0	10	10	0	0	0	2.44
Renault Kiger 1.0l Energy Life	R 204 900.00	50	30	0	10	10	0	0	0	2.44
GWM Steed 5 Single Cab 2.2 Mpi 4x2 Workhorse F/L	R 215 900.00	50	30	0	10	10	0	0	0	2.32
BAIC X25 SUV 1.5 + MT	R 219 990.00	50	30	0	10	10	0	0	0	2.27
Volkswagen Polo Vivo 55kW Trendline	R 232 500.00	50	30	0	10	10	0	0	0	2.15
Kia Pegas 1.4 MT LX	R 234 995.00	50	30	0	10	10	0	0	0	2.13
GWM Steed 5 Double Cab 2.2 Mpi 4x2 Base F/L	R 235 900.00	50	30	0	10	10	0	0	0	2.12
Suzuki Ertiga 1.4 Manual	R 241 900.00	50	30	0	10	10	0	0	0	2.07
JMC Landwind 5 2.0T Lux	R 241 990.00	50	30	0	10	10	0	0	0	2.07
Suzuki Ciaz 1.5 Manual	R 245 900.00	50	30	0	10	10	0	0	0	2.03
Suzuki Vitara Brezza 1.5 Manual	R 248 900.00	50	30	0	10	10	0	0	0	2.01
Toyota Rumion 1.5 S MT	R 258 000.00	50	30	0	10	10	0	0	0	1.94
Mahindra PIK UP Single Cab S4 4x2	R 222 999.00	30	30	0	0	0	0	0	0	1.35
JMC Carrying S/C SWB 1.6 Ton Dropside STD	R 233 880.00	0	0	0	0	0	0	0	0	0.00
JMC Carrying S/C SWB Chassis Cab	R 219 880.00	0	0	0	0	0	0	0	0	0.00
Mahindra Bolero BMT	R 176 999.00	0	0	0	0	0	0	0	0	0.00
Suzuki Super Carry 1.2 Pick-Up	R 159 900.00	0	0	0	0	0	0	0	0	0.00

5. Discussion and findings

The purpose of this report is to inform the public on the safety features currently available in the 'entry-level' segment of motor vehicles in South Africa. Anecdotal evidence suggests buyers of entry-level motor vehicles may prioritise affordability over all other vehicle features. However, the safety aspect should not be disregarded when making this important decision.

Anti-locking Braking Systems (ABS), Electronic Stability Control (ESC), and the number of airbags on offer serve as the assessment criteria for the thirty-eight (38) identified motor vehicles. As important as they are, the allocation of points for safety belts is not considered as they are now standardised for all motor vehicles. The presence and nature of head restraints was initially considered as part of the assessment criteria, but insufficient information is available at dealer level, therefore this assessment criterion has been eliminated from the report. In future, this, and other safety technologies, may be considered for inclusion, as the specification level of entry-level vehicles increases over time.

A significant finding of the current report is that six of the vehicles under investigation come equipped with ESC. The most common safety features of the entry-level vehicles were ABS (34 vehicles) and front driver and front passenger airbags (33 vehicles each). The least common safety features were side airbags (only 1 vehicle) and none of the vehicles were equipped with curtain airbags.

In this report, only 5 vehicles under consideration have been crash tested for the South African market. A total of nineteen vehicles have now been crash tested for the African market. A handful of vehicles in this report have been crash tested in other NCAP regions, but as it cannot be confirmed that those models are exactly the same as the models sold in South Africa, these test scores were not included in this safety report.

In terms of **true safety points** attained, points of twenty (20) or less are considered as having 'poor' safety. Safety points between 20 and 50 can be considered as having 'moderate' safety, and safety points of 50 and above can be considered as having 'acceptable' safety. In Table 4, 4 vehicles fall under the 'poor safety' category, 23 vehicles fall under the 'moderate safety' category, and 11 vehicles fall under the 'acceptable' category for 2022.

Only Honda (1 vehicle), and Fiat (1 vehicle) had all their entry-level vehicles score within the acceptable safety range. Suzuki had 6 vehicles score in the acceptable safety range, but 3 vehicles scored in the moderate safety range and 1 vehicle in the poor safety range. Toyota had 1 vehicle in the acceptable safety range and 2 in the moderate safety range. Mahindra had 1 vehicle in the acceptable safety range but 3 in the moderate safety range and 1 in the poor safety range. Renault also had 1 vehicle in the acceptable safety range but 2 in the moderate safety range.

The Fiat 500 received the highest safety rating of 90 points and was the only entry-level vehicle to include side airbags. The Fiat 500 would probably have obtained a higher score had it been crash tested, and the AASA therefore recommends that all manufacturers crash test their vehicles. These tests will not only improve the safety results of the vehicles but will also provide authoritative demonstrations of the vehicles' safety levels.

Table 4. True safety points

‘Poor’ Safety (Score ≤ 20)	‘Moderate’ Safety (Score 20 - 50)	‘Acceptable’ Safety (Score > 50)
JMC Carrying S/C SWB 1.6 Ton Dropside STD	BAIC D20 Hatchback 1.3+5MT Comfort	Fiat 500 0.9L FWD SMT
JMC Carrying S/C SWB Chassis Cab	BAIC X25 SUV 1.5 + MT	Honda Amaze 1.2 Trend Manual
Mahindra Bolero BMT	Datsun Go A (O) Mid	Mahindra XUV 300 W4
Suzuki Super Carry 1.2 Pick-Up	Datsun Go+ A (O) Mid	Renault Kwid 1.0l Expression 5-dr ABS
	GWM Steed 5 Double Cab 2.2 Mpi 4x2 Base F/L	Suzuki Baleno 1.4 Manual
	GWM Steed 5 Single Cab 2.2 Mpi 4x2 Workhorse F/L	Suzuki Celerio 1.0 GA MT
	Hyundai Atos 1.1 Motion MT	Suzuki Dzire 1.2 Manual
	Hyundai Grand i10 1.0 Motion Manual	Suzuki Ignis 1.2 Manual
	JMC Landwind 5 2.0T Lux	Suzuki S-Presso 1.0 Manual
	Kia Pegas 1.4 MT LX	Suzuki Swift 1.2 Manual
	Kia Picanto 1.0 MT Smart	Toyota Starlet 1.4 Xi MT
	Mahindra KUV 100 #XPRESZ Panel Van	
	Mahindra KUV 100 NXT	
	Mahindra PIK UP Single Cab S4 4x2	
	Nissan NP200 1.6 8V Base	
	Renault Kiger 1.0l Energy Life	
	Renault Triber 1.0l Expression 5-dr	
	Suzuki Ciaz 1.5 Manual	
	Suzuki Ertiga 1.4 Manual	
	Suzuki Vitara Brezza 1.5 Manual	

	Toyota Agya 1.0 MT	
	Toyota Rumion 1.5 S MT	
	Volkswagen Polo Vivo 55kW Trendline	

As for the Safety/Affordability index, it can be used as a guide to understand the 'Affordability of Safety' proposition. For this report, a score of four points and above can be seen as 'acceptable safety/affordability', a score between three and 3.99 points can be seen as 'moderate safety/affordability', whereas 2.99 points and below can be seen as 'poor safety/affordability'.

As indicated in Table 5: 5 vehicles fall under the 'acceptable safety/affordability' category, 8 vehicles fall under the 'moderate safety/affordability' category, and 25 vehicles fall under the 'poor safety/affordability' categories.

We are hopeful this report will inform the public, aid customer purchasing decisions, and persuade motor manufacturers to prioritise safety in vehicles produced for the South African market. Once again, we call upon motor manufacturers to consider substituting luxury or convenience specification items with safety items. We believe this consideration must be weighed against the inexperience of the typical drivers of these vehicles, and the need to protect them against traffic hazards to the greatest extent possible. Furthermore, in light of Global NCAP's #SaferCarsForAfrica latest crash test results, we appeal to all manufacturers to crash test their vehicles before sale. As evidenced, safety features alone do not constitute the overall safety of a vehicle. Only crash testing can provide a holistic view of the safety of the vehicle and should thus be prioritised.

Table 5. Safety/Affordability categories

'Poor' Safety/ affordability (Score ≤ 2.99)	'Moderate' Safety/ affordability (Score 3 - 3.99)	'Acceptable' Safety/ affordability (Score ≥ 4)
BAIC X25 SUV 1.5 + MT	BAIC D20 Hatchback 1.3 + 5 MT Comfort	Fiat 500 0.9L FWD SMT
Datsun Go A (O) Mid	Honda Amaze 1.2 Trend Manual	Suzuki Celerio 1.0 GA MT
Datsun Go+ A (O) Mid	Mahindra KUV 100 NXT	Suzuki Dzire 1.2 manual
GWM Steed 5 Double Cab 2.2 Mpi 4x2 Base F/L	Mahindra XUV 300 W4	Suzuki S-Presso 1.0 manual
GWM Steed 5 Single Cab 2.2 Mpi 4x2 Workhorse F/L	Renault Kwid 1.0l Expression 5-dr ABS	Suzuki Swift 1.2 manual
Hyundai Atos 1.1 Motion MT	Suzuki Baleno 1.4 manual	
Hyundai Grand i10	Suzuki Ignis 1.2 manual	
JMC Carrying S/C SWB 1.6 Ton Dropside STD	Toyota Starlet 1.4 Xi MT	
JMC Carrying S/C SWB Chassis Cab		
JMC Landwind 5 2.0T Lux		
Kia Pegas 1.4 MT LX		
Kia Picanto 1.0 MT Smart		
Mahindra Bolero BMT		
Mahindra KUV 100 #XPRESZ Panel Van		
Mahindra PIK UP Single Cab S4 4X2		
Nissan NP200 1.6 8V Base		
Renault Kiger 1.0l Energy Life		
Renault Triber 1.0l Expression 5-dr		
Suzuki Ciaz 1.5 manual		
Suzuki Ertiga 1.4 manual		

Suzuki Super Carry 1.2 Pick Up		
Suzuki Vitara Brezza 1.5 manual		
Toyota Agya MT 1.0 manual		
Toyota Rumion 1.5 S MT		
Volkswagen Polo Vivo 55kW Trendline		

6. Limitations

The AASA notes there are a multitude of safety features available on the market, and also recognises the various effects they may have in reducing fatalities/injuries. As such the calculations used herein are by no means all-encompassing in terms of their ability to save lives, but merely addresses their existence within a motor vehicle. Furthermore, the current weighting system was developed by the AASA, and is based on 'face-value' importance of the various safety features under investigation. The AASA recognises there will be room for improvement regarding the allocation of weights to safety features in future reports.

7. Conclusion

The purpose of this report is to inform and highlight the value of safety of 'entry-level vehicles' currently available in South Africa. The AASA encourages consumers to do adequate research when making a decision on purchasing a motor vehicle. It urges consumers to ensure that the vehicle model they intend on purchasing comes equipped with the safety features that are advertised. The AASA also encourages customers to not be hesitant to ask questions of dealers and salespeople of safety ratings and available safety features on vehicles. If there is uncertainty about any of the safety aspects of the vehicle consumers intend on purchasing, they are urged to request a brochure detailing the technical specifications of the vehicle and to clarify any uncertainties with the relevant salesperson.

Safety should be a priority when purchasing a vehicle.

8. References

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